CLAIMS

1. Digital transmission method of the error correction coding comprising on the one hand, before a step of transmission over a channel, a coding procedure for generating, from a useful infer nation item, a coded information item with a certain global redundancy characterised by a global efficiency, the said coding procedure comprising at least two elementary coding steps associated with respective puncturing steps and concatenated in series, an interleaving step taking place between two successive elementary coding steps, each of the said elementary coding steps generating, from an input information item, an output information item with a certain elementary coding step redundancy, characterised by an elementary coding step efficiency modified by the corresponding puncturing, the said global efficiency being equal to the product of the efficiencies of the said elementary coding steps each modified by the corresponding puncturing, and on the other hand, after the said step of transmission over the said channel, a decoding procedure for obtaining, from an information item to be decoded, an estimation of the said useful information item by correcting transmission errors, the said decoding procedure being iterative and each of its iterations comprising elementary decoding steps corresponding to the said elementary coding steps as well as deinterleaving and depuncturing steps and puncturing and interleaving steps enabling each elementary decoding step to take into account information corresponding to the information respectively output from and input to the corresponding coder, the said transmission method being characterised in that it also comprises a step of observing the transmission conditions in order to determine at least one parameter characteristic of the transmission conditions, a redundancy distribution selection step in order to select, as a function of the said at least one parameter, a distribution of the said elementary coding step redundancies amongst a plurality of distributions of the said elementary coding step redundancies for

which the said global efficiency is the same, and a step of adapting coding and decoding procedures in order to adapt the said coding procedure and the said decoding procedure as a function of the said selected redundancy distribution.

2. Digital transmission method of the error correction coding type according to Claim 1, characterised in that the said step of adapting coding and decoding procedures modifies the said puncturing and interleaving steps of the said coding procedure as well as the said deinterleaving and depuncturing steps and the said puncturing and interleaving steps of the said decoding procedure as a function of the said selected redundancy distribution.

3. Digital transmission method of the error correction coding type according to Claim 1, characterised the said coding and decoding procedure adaptation step eliminates one or more elementary coding steps and the corresponding puncturing and interleaving steps of the said coding procedure, as well as the elementary decoding steps, the deinterleaving and depuncturing steps and the corresponding puncturing and interleaving steps of the said decoding procedure as a function of the said selected redundancy distribution.

4. Digital transmission method of the error correction coding type according to Claim 3, characterised in that the said coding and decoding procedure adaptation step also modifies the said remaining puncturing and interleaving steps of the said coding procedure as well as the said remaining deinterleaving and depuncturing steps and the said remaining puncturing and interleaving steps of the said decoding procedure as a function of the said selected redundancy distribution.

5. Digital transmission method of the error correction coding type according to Claim 1, characterised in that the said elementary coding steps use convolutional codes.

6. Digital transmission method of the error correction coding type according to Claim 1, characterised in that the said elementary coding steps use block codes.

7. Digital transmission method of the error correction coding type according to Claim 1, characterised in that a parameter characteristic of the transmission conditions can be the bit error, the packet error rate, the signal/noise ratio, the signal to interference plus noise ratio, the number of active users of a telecommunication system, the quality of service required by the transmission system, and the speed of movement of the user of the transmission system.

8. Digital transmission method of the error correction coding type according to Claim 1, characterised in that the said transmission conditions observation step and the said redundancy selection step are executed at a transmitter for which the said coding procedure is executed, the said selected redundancy distribution being transmitted to a receiver for which the said decoding procedure is executed.

9. Digital transmission method of the error correction coding type according to Claim 1, characterised in that the said transmission conditions observation step and the said redundancy selection step are executed both at a transmitter for which the said coding procedure is executed and at a receiver for which the said decoding procedure is executed.